

SCIENTIFIC RESULTS FROM THE MAMMAL SURVEY NO. XLVI

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FURTHER EXAMINATION OF SINGHALESE SPECIES OF *Funambulus* AND DESCRIPTION OF THE NEW SUB-SPECIES, *F. p. matugamensis*.

From Ceylon the Indian Mammal Survey obtained 152 specimens of *Funambulus palmarum* which were classified by Mr. Wroughton and Miss Ryley. Later, in 1915 Mr. Thomas and Mr. Wroughton published a paper 'On Singhalese species of *Funambulus*' J.B.N.H.S., vol. xxiv, No. 1, in which they give a key to the species and divide *Funambulus palmarum* into five distinct sub-species:—

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| (1) | <i>Funambulus palmarum</i> | <i>palmarum</i> |
| (2) | " | " <i>favonicus</i> |
| (3) | " | " <i>kelaarti</i> |
| (4) | " | " <i>brodiei</i> |
| (5) | " | " <i>olympius</i> |

mainly on considerations of differences in colour and in habitat. They also state that true *Funambulus palmarum* does not occur in Ceylon.

Recently three new sets of material have been received from Ceylon and further investigation has thus been made possible. The Colombo Museum has sent ninety specimens representing all the nine provinces into which Ceylon is divided: Mr. W. W. A. Phillips has presented to the British Museum a set of twenty-one specimens and has also sent another lot of twenty-eight specimens from his own estate, making a total of 139. In the British Museum stock was found an old specimen, presented in 1866 by Viscount Walden and labelled '*S. tristriatus*', which on detailed examination of its skull and skin must now be included in the new collections. In characteristics and habitat these 140 specimens on the whole bear out the division made by Mr. Thomas and Mr. Wroughton, but in addition they also disclose the presence of true *palmarum*, as shown in three specimens obtained on low ground in the east of the North Central Province.

A NEW SUB-SPECIES CALLED *Funambulus palmarum matugamensis*.

These collections show too that 18 specimens from Matugama in the West Province, about 30 miles south-east of Colombo, differ so much in colour and measurement of skin and character of skull that they must form a new sub-species to which I have given the name *Funambulus palmarum matugamensis*. Of these eighteen, Mr. Phillips has sent twelve, while five came from Colombo Museum and the old one from the British Museum collections.

This new sub-species comes closest in size to *F. p. favonicus*. Thus the average measurements of seven adult specimens give

Head and Body: 144'7 (143); Tail: 138 (144); Hind foot: 35 (33); Ear: 17 (16). SKULL:—Greatest length: 38'7 (38); nasals: 11 (12); zygomatic breadth: 21 (22); interorbital breadth: 11 (11). A cleaned skull of this new sub-species shows:—Greatest length 38 (38); condylobasilar length: 32 (31); nasals: 11 (12); zygomatic breadth: 21 (22); basilar length: 30 (30); palatilar length: 16 (16'5); interorbital breadth: 11'5 (11'5); upper tooth row: 7 (7'5).

The figures in brackets are the measurements of the type of *F. p. favonicus*.

But in colour there is much less resemblance. These eighteen specimens are dark as *F. p. olympius*, the saddle being almost black but the three sub-equal dorsal stripes are here all the same colour of tawny or tawny ochraceous, and $\frac{1}{8}$ " to $\frac{1}{4}$ " in breadth. The under parts are ochraceous buff or woodbrown, almost isabelline in some specimens. The tail is somewhat bushy and is orange-rufous below, thus resembling that of *F. p. brodiei*. The neck and shoulders are olive, while the flanks are woodbrown. The face is as a rule coloured like the neck but in winter pelage gets a reddish tinge. The feet are dark as in *F. p. olympius*,

The shape of the skull in this sub-species differs from that of the others in the prominence of the olfactory lobes and the size and shape of the nasals, also in the distance between the point of junction of these lobes and the point of junction of the nasals. In this sub-species the measurement between these two points is 4 mm. while in *F. p. favonicus* it is 5 mm.; in *F. p. olympius* 6 mm. and in *F. p. kelaarti* from 4.5 to 5 mm. Examination of the collection as a whole shows that the shape of the nasals in the different sub-species is fairly constant:—e.g., the posterior edge of the nasals in *F. p. favonicus* is deeply and sharply serrate: that of *F. p. kelaarti* is also pointed but not so deeply serrate and the nasals terminate practically in a line with the frontopremaxillary suture, while that of *F. p. olympius* is of rounded shape almost oval, and ends well in front of the suture.

In classifying these 140 specimens reliance has been placed mainly on the characters of the skull and on the locality whence they were obtained since the variability of colour of coat and size in any one species is considerable, depending on the season and nature of the habitat. This new sub-species comes from a tract of country 100 feet above sea-level in one of the moistest areas of Ceylon with an average rainfall of over 150". Rubber and cocoa palms are grown there and there is much low scrub and jungle around the estates. *F. p. matugamensis* may be found therefore to be a localized form of *F. p. palmarum* just as *F. p. olympius* has been confined to the high hills, and *F. p. favonicus* to the submontane regions.

The classification of these specimens resulted in finding *F. p. olympius* 48; *F. p. favonicus* 28; *F. p. kelaarti* 22; *F. p. brodiei* 10; *F. p. matugamensis* 18. The remaining specimens could not be determined as skull or labels were amissing. There were 3 albino juvenile specimens, one of which had a skull resembling *F. p. favonicus* but as there was no label it cannot be named.